Notice of Determination & Addendum to Rationale
General NPDES Permit for Discharges Associated with
Ready-Mixed Concrete Facilities - TNG110000
November 15, 2002

I. Background

In 1996, the Tennessee Department of Environment and Conservation issued a general permit for discharges of process wastewater, storm water, and for the operation of recycle systems, at ready-mixed concrete plants and similar-type activities. The permit expired November 24, 2001.

The department put a draft permit on public notice September 10, 2001, and held a public hearing on October 18, 2001. No comments were received from the public.

On December 17, 2001, the division received comments from the Environmental Protection Agency (EPA) on the draft permit.

II. Comments and responses to comments

Comment: The draft permit contains only a daily maximum limitation for TSS (and flow monitoring), but does not require a monthly average. Per 40 CFR Section 122.45(d) if there are continuous discharges (which I do not know if this is the case here or not), then monthly average should also be part of the permit. The rationale (or in this case, the addendum to the rationale) should address this, if these discharges will not be continuous.

Response: Process wastewater from ready-mixed concrete plants is discharged intermittently. The concrete is made in batches and the trucks are washed out in batches. Also, at many or most plants, process wastewater is recycled to a great extent.

Thus, the Division will keep the daily maximum limitation, but not establish a monthly average limitation.

Comment: The definition of "daily maximum concentration" is very misleading. The proposed definition reads: "The 'daily maximum concentration' is a limitation on the average concentration, in milligrams per liter, of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily concentration is the arithmetic mean of the concentrations of samples collected during any calendar day or 24-hour sampling period."

The commenter notes that per federal regulations, at 40 CFR 122.2, a "maximum daily discharge limitation" means the highest allowable "daily discharge."

Response: Our definition is taken from our state regulations. It defines the same concept as the EPA term, "maximum daily discharge limitation." That is, the maximum allowable daily discharge, where daily discharge is the average of discharge concentrations over the course of a calendar day.

Though our permit does not have a separate definition of the daily discharge, our definition of daily maximum concentration includes the concept of daily discharge, in the words, "the average concentration, in milligrams per liter, of the discharge during any calendar day."

It is important that our definitions in our permits be consistent with Tennessee's regulations. For that reason, we will not be changing this definition in this permit.

For reference, the EPA definitions are given below.

Daily discharge means the "discharge of a pollutant" measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

"Maximum daily discharge limitation" means the highest allowable "daily discharge."

Comment: The pH limit in the draft permit is 6.0-9.0; however, according to state water quality standards, chapter 1200-4-3-.03, the pH for protection of fish and aquatic life shall lie in the range 6.5-9.0. EPA comments that the minimum pH should be 6.5.

Response: The division will change the lower pH limit to 6.5.

Comment: The rationale sheet on page 6 makes reference to monitoring concentrations for COD (100 mg/l) and TSS (200 mg/l); however, these are not in the permit itself.

Response: The draft permit will be corrected on this point, as follows.

One, these concentration will be referred to as “cutoff concentrations.” This is an accord with the state’s (and EPA’s) multi-sector general permit for industrial storm water runoff. Two, the COD cutoff concentration will be 120 mg/l instead of 100. This is to agree with the state and EPA’s multi-sector general storm water permit. Three, certain conditions will be added to the permit to direct the permittees to take corrective actions if their storm water discharges are found to exceed the cutoff concentrations. Four, the parameter iron is being added to the storm water sampling requirement, and this is in accord with the state’s and EPA’s multi-sector storm water general permit.

Comment: Flow monitoring is not required for storm water discharges, and it should be required. Reference 40 CFR 122.44(i).

Response: The permit does not include limits, per se, and does not include mass limits. So, there is no need for a discharge flow value in order to verify compliance with the permit. Lack of a flow monitoring requirement is not unusual for storm water discharge monitoring requirements.

Comment: Consider using a settleable solids limit in this permit.

Response: The Division believes that the reliable TSS parameter and the limit of 50 mg/l will also ensure that amounts of settleable solids in the discharge is insignificant.

Comment: EPA suggested that a yearly certification statement be made by the permittee that truck washout sites are meeting the requirements of the permit.

Response: The Division is adding a requirement that permittees annually verify, as part of the annual facility storm water pollution prevention plan review (see section VII.(e) of the permit), that remote washout sites are in compliance with section I.D.4. of the permit.

III. Other issues

In discussions with EPA about the TMDL provisions of this permit, there has been a question about what procedures will be followed in cases where a ready-mixed concrete plant discharge is included in a TMDL, and in particular, the case where the discharge is existing and covered under this general permit.

Example scenario. A discharger releases a maximum of 10,000 gallons per day of process wastewater to an impaired stream, impaired for siltation. At the permit limit of 50 mg/l of TSS, this is equivalent to 4.17 lb/day of suspended solids in the discharge. (50 mg/l X 8.34 conversion factor X 0.010 MGD = 4.17 lb/day) The state promulgates a TMDL for total suspended solids for this particular receiving stream.

If the TMDL allocates 4.17 lb/day or greater to the ready-mixed concrete plant, then the concrete plant is in a position to remain covered under this general permit. If it is in compliance with permit limits and can maintain compliance with permit limits, and at a discharge of 10,000 gallons per day or less, then the plant operator can make a certification to this effect, submit it to the division for evaluation, and remain covered under this general permit. Obviously if conditions change – for instance, if the flow rate is increased to 20,000 gallons per day – then the certification is no longer valid, and the operator should notify the division of the change.

If the TMDL allocates less than 4.17 lb/day, then the concrete plant cannot remain covered under this general permit. It must discontinue discharge, direct discharge elsewhere, or apply for and obtain an individual permit.

As a note, it is likely that any TMDL for suspended solids would be expressed in terms of an annual loading. If this is the case, we would convert the annual loading to a daily load by dividing the annual value by the number of days the ready-mixed concrete plant is in operation.

The language in the final permit reads as follows:

> If a Total Maximum Daily Load (TMDL) has been developed and approved for the receiving water body, where the discharge is new, expanded or existing, discharges from the facility must be consistent with the applicable provisions of the TMDL. In the situation where the limitations of this permit allow discharge of pollutants of concern in excess of the wasteload allocation (WLA) specified in the TMDL, then the permittee cannot remain authorized under this general permit.

The permit is being revised according to the above responses to comment. The Division believes the permit as revised will protect the classified uses of the streams in Tennessee and will issue the permit on or about November 15, 2002, with an effective date of December 1, 2002.

Date: _____

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Manager, Permit Section